MSE **Millennium Science & Engineering, Inc.**

1605 N. 13th Street
Boise, Idaho 83702
Phone: 208.345.8292
Fax: 208.344.8007

July 17, 2007

Ms. Cheryl Robinson
Air Quality Permitting Engineer
Idaho Department of Environmental Quality
1410 N. Hilton
Boise, Idaho 83706

RE: Permit to Construct Application, Concrete Batch Plant, Romero General Construction, Mountain Home, Idaho

Dear Cheryl:

Please find enclosed one copy of the Permit to Construct Application for the Romero General Construction Corporation concrete batch plant in Mountain Home, Idaho. A check to pay the Permit to Construct application fees is also enclosed.

Thank you for your assistance with this project. If you have any questions please call me at (208) 345-8292.

Regards,

Troy D. Riecke, P.E.
Environmental Engineer

Cc: Mr. Dale Pettibone – Romero General Construction Corp.

IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY

1410 North Hilton
Boise, Idaho 83706-1253

RECEIPT

07-18-07
DATE

RECEIVED FROM Romero General Construction Corp

SOURCE
Cash ☐ Check ☑ Money Order ☐ No. 220846

DESCRIPTION	AMOUNT OF PAYMENT
PTC Application Fee	1,000 00

RECEIVED BY

TOTAL RECEIVED 1000.00

PID	OBS	CA	SUB-OBJ	WP	BE

Nº 82767

RECEIVED
JUL 16 2007
DEPARTMENT OF ENVIRONMENTAL QUALITY
STATE A Q PROGRAM

Permit to Construct Application

Romero General Construction Corp.
Concrete Batch Plant
Mountain Home, Idaho

July 17, 2007

Prepared for:

ROMERO GENERAL CONSTRUCTION CORPORATION

2150 N. Centre Pkwy, Suite I
Escondido, CA 92026

Prepared by:

Millennium Science & Engineering, Inc.
1605 North 13th Street
Boise, Idaho 83702
(208)345-8292

MSE Millennium Science & Engineering, Inc.
Environmental Science & Engineering Solutions for the 21st Century

LIST OF ATTACHMENTS

Attachment 1

Permit Application Forms

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION

Revision 3
04/03/07

Please see instructions on page 2 before filling out the form.

DEQ USE ONLY
Date Received
Project Number
Payment / Fees Included? Yes ☐ No ☐
Check Number

COMPANY NAME, FACILITY NAME, AND FACILITY ID NUMBER

1. Company Name	Romero General Construction	
2. Facility Name	MT Home AFB	3. Facility ID No.
4. Brief Project Description - One sentence or less	Relocate and operate concrete batch plant from Washington location	

PERMIT APPLICATION TYPE

5. ☒ New Facility ☐ New Source at Existing Facility ☐ Unpermitted Existing Source
☐ Modify Existing Source: Permit No.:_____ Date Issued:_____
☐ Required by Enforcement Action: Case No.:_____

6. ☒ Minor PTC ☐ Major PTC

FORMS INCLUDED

Included	N/A	Forms	DEQ Verify
☒	☐	Form GI – Facility Information	☐
☐	☐	Form EU0 – Emissions Units General	☐
☐	☐	Form EU1 - Industrial Engine Information Please Specify number of forms attached: _____	☐
☐	☐	Form EU2 - Nonmetallic Mineral Processing Plants Please Specify number of forms attached: _____	☐
☐	☐	Form EU3 - Spray Paint Booth Information Please Specify number of forms attached: _____	☐
☐	☐	Form EU4 - Cooling Tower Information Please Specify number of forms attached: _____	☐
☐	☐	Form EU5 – Boiler Information Please Specify number of forms attached: _____	☐
☐	☐	Form HMAP – Hot Mix Asphalt Plant Please Specify number of forms attached: _____	☐
☒	☐	Form CBP - Concrete Batch Plant Please Specify number of forms attached: _____	☐
☐	☐	Form BCE - Baghouses Control Equipment	☐
☐	☐	Form SCE - Scrubbers Control Equipment	☐
☒	☐	Forms EI-CP1 - EI-CP4 - Emissions Inventory– criteria pollutants (Excel workbook, all 4 worksheets)	☐
☒	☐	PP – Plot Plan	☐
☒	☐	Forms MI1 – MI4 – Modeling (Excel workbook, all 4 worksheets)	☐
☒	☐	Form FRA – Federal Regulation Applicability	☐

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
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Air Permit Hotline – 1-877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION

Revision 3
03/26/07

Please see instructions on page 2 before filling out the form.

All information is required. If information is missing, the application will not be processed.

IDENTIFICATION	
1. Company Name	Romero General Construction Corp.
2. Facility Name (if different than #1)	Mountain Home Idaho
3. Facility I.D. No.	
4. Brief Project Description:	Concrete batch plant
FACILITY INFORMATION	
5. Owned/operated by: (√if applicable)	☐ Federal government ☐ County government ☐ State government ☐ City government
6. Primary Facility Permit Contact Person/Title	Dale Pettibone, Superintendent
7. Telephone Number and Email Address	760-489-8412 (office) 208-413-5056 (cell) dpettibone@romerogc.com
8. Alternate Facility Contact Person/Title	
9. Telephone Number and Email Address	
10. Address to which permit should be sent	4525 NE Lott Road
11. City/State/Zip	Mountain Home, ID 83647
12. Equipment Location Address (if different than #10)	Mountain Home Air Force Base UTM: 11T 590869m E 4768127m N
13. City/State/Zip	Mountain Home, Idaho
14. Is the Equipment Portable?	☒ Yes ☐ No
15. SIC Code(s) and NAISC Code	Primary SIC: 3531 Secondary SIC (if any): NAICS: 327320
16. Brief Business Description and Principal Product	Concrete batch plant
17. Identify any adjacent or contiguous facility that this company owns and/or operates	
PERMIT APPLICATION TYPE	
18. Specify Reason for Application	☒ New Facility ☐ New Source at Existing Facility ☐ Unpermitted Existing Source ☐ Modify Existing Source: Permit No.:_____ Date Issued: _____ ☐ Permit Revision ☐ Required by Enforcement Action: Case No.:_____

CERTIFICATION		
IN ACCORDANCE WITH **IDAPA 58.01.01.123** (RULES FOR THE CONTROL OF AIR POLLUTION IN IDAHO), I CERTIFY BASED ON INFORMATION AND BELIEF FORMED AFTER REASONABLE INQUIRY, THE STATEMENTS AND INFORMATION IN THE DOCUMENT ARE TRUE, ACCURATE, AND COMPLETE.		
19. Responsible Official's Name/Title	See signature on CBP form	
20. RESPONSIBLE OFFICIAL SIGNATURE		Date:
21. ☒ Check here to indicate you would like to review a draft permit prior to final issuance.		

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
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Air Permit Hotline–1-877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION

Revision 4
04/18/07

Please see instructions on page 5 before filling out the form.

GENERAL INFORMATION

Company Name:	Romero General Construction		
Facility Name:	Mountain Home Air Force Base	**Facility ID No:**	
Brief Project Description:	Locate and operate concrete batch plant		
Mailing Address:	4525 NE Lott Road		
City:	Mountain Home	**State:**	ID
Zip Code:	83647	**County:**	Elmore
General Nature of Business & Products:	Asphalt concrete placing		

Contact Name, Title:	Dale Pettibone, Superintendent		
Phone:	760-489-8412	**Cell:**	208-413-5056
Email:	dpettibone@romerogc.com		

Owner or Responsible Official Name, Title:	Dale Pettibone, Superintendent
Phone:	208-413-5056
Email:	dpettibone@romerogc.com

Proposed Initial Plant Location:	Mountain Home Air Force Base		
Nearest City:	Mountain Home	**Estimated Startup Date:**	September 1, 2007
County:	Elmore		

Reason for Application:	☒ Permit to construct a new source ☐ Permit to operate an existing unpermitted source ☐ Permit to modify/revise an existing permitted source (identify the permit below) Permit No.: Issue Date: Facility ID:
☒ Check here to indicate you would like to review a draft permit prior to final issuance.	
Comments: Temporary 6 month operation, existing equipment to be moved from Washington state. Will be co-located with a rock crusher. Applicant willing to accept separation distance between crusher and batch plant up to 500 feet or limits of operation on equipment if required by state in permit.	

CONCRETE BATCH PLANT INFORMATION

1. Concrete Batch Plant

Manufacturer:	CON-E-CO	**Model:**	Lo-Pro 12 Concrete Batch Plant
Manufacture Date:	05-05		
Maximum Hourly Throughput:	120 (cy/hour)		
Maximum Daily Throughput:	2880 (cy/day)		
Maximum Annual Throughput:	1,051,200 (cy/year)		
Requested Annual Throughput:	1,051,200 (cy/year)		

2a. Cement Storage Silo Baghouse No. 2

Manufacturer:	CON-E-CO	**Model:**	PJC-300S
Stack Height from Ground:	47.5 (ft)	**Exit Air Flow Rate:**	1,500 (acfm)
Stack Inside Diameter:	downward discharge (ft)	* **PM_{10} Control Efficiency:**	99 (%)
* **Manufacturer Grain Loading Guarantee:**			
* Attach manufacturer's PM_{10} control efficiency if available.			

2b. Cement Storage Silo Baghouse No. ____

Manufacturer:		**Model:**	
Stack Height from Ground:	(ft)	**Exit Air Flow Rate:**	(acfm)
Stack Inside Diameter:	(ft)	* **PM_{10} Control Efficiency:**	(%)
* **Manufacturer Grain Loading Guarantee:**			
* Attach manufacturer's PM_{10} control efficiency if available.			

2c. Cement Supplement (such as flyash) Storage Silo Baghouse No. 1

Manufacturer:	CON-E-CO	**Model:**	PJC-300S
Stack Height from Ground:	20.9 (ft)	**Exit Air Flow Rate:**	1,000 (acfm)
Stack Inside Diameter:	downward discharge (ft)	* **PM_{10} Control Efficiency:**	99 (%)
* **Manufacturer Grain Loading Guarantee:**			
* Attach manufacturer's PM_{10} control efficiency if available.			

2d. Cement Supplement (such as flyash) Storage Silo Baghouse No. ____

Manufacturer:		**Model:**	
Stack Height from Ground:	(ft)	**Exit Air Flow Rate:**	(acfm)
Stack Inside Diameter:	(ft)	* **PM_{10} Control Efficiency:**	(%)
* **Manufacturer Grain Loading Guarantee:**			
* Attach manufacturer's PM_{10} control efficiency if available.			

3. Weigh Batcher Baghouse(s)

Manufacturer:	CON-E-CO	**Model:**	14-23
Stack Height from Ground:	18.3 (ft)	**Exit Air Flow Rate:**	180 (acfm)
Stack Inside Diameter:	Downward discharge (ft)	* **PM_{10} Control Efficiency:**	99 (%)
* **Manufacturer Grain Loading Guarantee:**			
* Attach manufacturer's PM_{10} control efficiency if available.			

ELECTRICAL GENERATOR SET INFORMATION (if applicable)

Manufacturer:	MQ Power			**Model:**	DCA180SSJ
Maximum Rated Capacity:	315	☒ Hp	☐ kW		
Fuel Type:	☐ Gasoline	☒ Diesel	☐ Natural Gas	☐ Propane	
Maximum Fuel Usage Rate:	11.4	☒ gal./hr.	☐ cfh		
Maximum Daily Hrs. of Operations:	24 (hours/day)				
Maximum Annual Hrs. of Operations:	8760 (hours/year)				
Stack Parameters:	Stack Height from Ground (ft): 5			Stack Exhaust Flow Rate (acfm): 1371	
	Stack Inside Diameter (ft): .38			Stack Exhaust Gas Temperature (°F): 800	

ADDITIONAL GENERATOR (if applicable)

Manufacturer:				**Model:**	
Maximum Rated Capacity:		☐ Hp	☐ kW		
Fuel Type:	☐ Gasoline	☐ Diesel	☐ Natural Gas	☐ Propane	
Maximum Fuel Usage Rate:		☐ gal./hr.	☐ cfh		
Maximum Daily Hrs. of Operations:	(hours/day)				
Maximum Annual Hrs. of Operations:	(hours/year)				
Stack Parameters:	Stack Height from Ground (ft): _____			Stack Exhaust Flow Rate (acfm): _____	
	Stack Inside Diameter (ft): _____			Stack Exhaust Gas Temperature (°F): _____	

☒ **$1,000 PTC application fee enclosed**

Certification of Truth, Accuracy, and Completeness (by Responsible Official)
I hereby certify that based on information and belief formed after reasonable inquiry, the statements and information contained in this and any attached and/or referenced document(s) are true, accurate, and complete in accordance with IDAPA 58.01.01.123-124.

Dale E Pettibone — *Responsible Official Signature*

Superintendent — *Responsible Official Title*

July 17, 2007 — *Date*

Dale Pettibone
Print or Type Responsible Official Name

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline - 1-877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION
Revision 3
4/5/2007

Please see instructions on page 2 before filling out the form.

Company Name:	**Romero General Construction Corp.**
Facility Name:	Mountain Home Air Force Base
Facility ID No.:	
Brief Project Description:	Concrete Batch Plant

SUMMARY OF FACILITY WIDE EMISSION RATES FOR CRITERIA POLLUTANTS - POINT SOURCES

1.	2.	3.											
		PM_{10}		SO_2		NO_X		CO		VOC		Lead	
Emissions units	**Stack ID**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**
Point Source(s)													
Cement Storage Bin 1	P1	0.08	0.37										
Cement Storage Bin 2	P2	0.08	0.37										
Cement Batcher	P3	0.05	0.21										
Electric Generator	P4	0.06	0.24	0.65	2.83	1.76	7.70	0.31	1.37	0.78	3.41		
name of the emissions unit5													
name of the emissions unit6													
name of the emissions unit7													
name of the emissions unit8													
name of the emissions unit9													
name of the emissions unit10													
name of the emissions unit11													
name of the emissions unit12													
name of the emissions unit13													
name of the emissions unit14													
name of the emissions unit15													
name of the emissions unit16													
name of the emissions unit17													
name of the emissions unit18													
name of the emissions unit19													
name of the emissions unit20													
name of the emissions unit21													
(insert more rows as needed)													
Total		0.27	1.19	0.65	2.83	1.76	7.70	0.31	1.37	0.78	3.41		

DEQ AIR QUALITY PROGRAM
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PERMIT TO CONSTRUCT APPLICATION

Revision 3
4/5/2007

Please see instructions on page 2 before filling out the form.

Company Name:	Romero General Construction Corp.
Facility Name:	Mountain Home Air Force Base
Facility ID No.:	
Brief Project Description:	Concrete Batch Plant

SUMMARY OF EMISSIONS INCREASE (PROPOSED PTE - PREVIOUSLY MODELED PTE) - POINT SOURCES

1.	2.	3.											
		PM_{10}		SO_2		NO_X		CO		VOC		Lead	
Emissions units	**Stack ID**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**
Point Source(s)													
Cement Storage Bin 1	P1	0.08	0.37										
Cement Storage Bin 2	P2	0.08	0.37										
Cement Batcher	P3	0.05	0.21										
Electric Generator	P4	0.06	0.24	0.65	2.83	1.76	7.70	0.31	1.37	0.78	3.41		
name of the emissions unit5													
name of the emissions unit6													
name of the emissions unit7													
name of the emissions unit8													
name of the emissions unit9													
name of the emissions unit10													
name of the emissions unit11													
name of the emissions unit12													
name of the emissions unit13													
name of the emissions unit14													
name of the emissions unit15													
name of the emissions unit16													
name of the emissions unit17													
name of the emissions unit18													
name of the emissions unit19													
name of the emissions unit20													
name of the emissions unit21													
(insert more rows as needed)													
Total		0.27	1.19	0.65	2.83	1.76	7.70	0.31	1.37	0.78	3.41		

	DEQ AIR QUALITY PROGRAM 1410 N. Hilton, Boise, ID 83706 For assistance, call the **Air Permit Hotline - 1-877-5PERMIT**	**PERMIT TO CONSTRUCT APPLICATION** Revision 3 4/5/2007

Please see instructions on page 2 before filling out the form.

Company Name:	Romero General Construction Corp.
Facility Name:	Mountain Home Air Force Base
Facility ID No.:	
Brief Project Description:	Concrete Batch Plant

SUMMARY OF EMISSIONS INCREASE (PROPOSED PTE - PREVIOUSLY MODELED PTE) - FUGITIVE SOURCES

1.	2.	3. Air Pollutant Maximum Change in Emissions Rate (lbs/hr or t/yr)											
		PM_{10}		SO_2		NO_X		CO		VOC		Lead	
Fugitive Source Name	**Fugitive ID**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**
Fugitive Source(s)													
Aggregate delivery to storage	F1	0.37	1.63										
Sand delivery to storage	F2	0.08	0.37										
Aggregate transfer to conveyor	F3	0.37	1.63										
Sand transfer to conveyor	F4	0.08	0.37										
Truck loading (truck mix)	F5	0.55	2.39										
name of fugitive source6													
name of fugitive source7													
name of fugitive source8													
name of fugitive source9													
name of fugitive source10													
name of fugitive source11													
name of fugitive source12													
name of fugitive source13													
name of fugitive source14													
name of fugitive source15													
name of fugitive source16													
name of fugitive source17													
name of fugitive source18													
name of fugitive source19													
name of fugitive source20													
name of fugitive source21													
(insert more rows as needed)													
Total		1.46	6.39										

N

0 1,000 2,000
(Scale in Feet)

SOURCE: Google Earth, 2007.

MSE Millennium Science & Engineering, Inc.
1605 North 13th Street
Boise, ID 83702
Phone: (208) 345-8292

Site Map

Romero Construction
Proposed Concrete Batch Plant

Mountain Home Air Force Base
Elmore County, Idaho

	7-17-07	TDR	Figure 1

DEQ AIR QUALITY PROGRAM
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PERMIT TO CONSTRUCT APPLICATION

Revision 3
4/5/2007

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Company Name:	Romero General Construction Corp.
Facility Name:	Mountain Home Air Force Base
Facility ID No.:	
Brief Project Description:	Concrete Batch Plant

SUMMARY OF AIR IMPACT ANALYSIS RESULTS - CRITERIA POLLUTANTS

		1.		2.	3.	4.		5.
Criteria Pollutants	**Averaging Period**	**Significant Impact Analysis Results (µg/m3)**	**Significant Contribution Level (µg/m3)**	**Full Impact Analysis Results (µg/m3)**	**Background Concentration (µg/m3)**	**Total Ambient Impact (µg/m3)**	**NAAQS (µg/m3)**	**Percent of NAAQS**
PM_{10}	24-hour		5	10.59	73.00	83.59	150	56%
	Annual		1	0.88	26.00	26.88	50	54%
SO_2	3-hr		25	2.96	34.00	36.96	1300	3%
	24-hr		5	1.08	26.00	27.08	365	7%
	Annual		1	0.22	8.00	8.22	80	10%
NO_2	Annual		1	0.59	17.00	17.59	100	18%
CO	1-hr		2000	2.87	3,600.00	3,602.87	10000	36%
	8-hr		500	1.03	2,300.00	2,301.03	40000	6%

	DEQ AIR QUALITY PROGRAM 1410 N. Hilton, Boise, ID 83706 For assistance, call the **Air Permit Hotline - 1-877-5PERMIT**	**PERMIT TO CONSTRUCT APPLICATION** Revision 3 3/27/2007

Please see instructions on page 2 before filling out the form.

Company Name:	Romero General Construction Corp.
Facility Name:	Mountain Home Air Force Base
Facility ID No.:	
Brief Project Description:	Concrete batch plant

POINT SOURCE STACK PARAMETERS

1.	2.	3a.	3b.	4.	5.	6.	7.	8.	9.	10.
Emissions units	**Stack ID**	**UTM Easting (m)**	**UTM Northing (m)**	**Base Elevation (m)**	**Stack Height (m)**	**Modeled Diameter (m)**	**Stack Exit Temperature (K)**	**Stack Exit Flowrate (acfm)**	**Stack Exit Velocity (m/s)**	**Stack orientation (e.g., horizontal, rain cap)**
Point Source(s)										
Concrete Batch Plant Group	CBPG	590869	4768127	911.00	2.00	0.001	ambient	0.00	0.001	grouped emission
Eletric Generator	P4	590869	4768127	911.00	1.50	0.12	699.82	1,371.00	63.04	
name of the emissions unit3										
name of the emissions unit4										
name of the emissions unit5										
name of the emissions unit6										
name of the emissions unit7										
name of the emissions unit8										
name of the emissions unit9										
name of the emissions unit10										
name of the emissions unit11										
name of the emissions unit12										
name of the emissions unit13										
name of the emissions unit14										
name of the emissions unit15										
name of the emissions unit16										
name of the emissions unit17										
name of the emissions unit18										
name of the emissions unit19										
name of the emissions unit20										
name of the emissions unit21										
(insert more rows as needed)										

	DEQ AIR QUALITY PROGRAM 1410 N. Hilton, Boise, ID 83706 For assistance, call the **Air Permit Hotline - 1-877-5PERMIT**	**PERMIT TO CONSTRUCT APPLICATION** Revision 3 4/5/2007

Please see instructions on page 2 before filling out the form.

Company Name:	Romero General Construction Corp.
Facility Name:	Mountain Home Air Force Base
Facility ID No.:	
Brief Project Description:	Concrete Batch Plant

FUGITIVE SOURCE PARAMETERS

1.	2.	3a.	3b.	4.	5.	6.	7.	8.	9.	10.
Emissions units	**Stack ID**	**UTM Easting (m)**	**UTM Northing (m)**	**Base Elevation (m)**	**Release Height (m)**	**Easterly Length (m)**	**Northerly Length (m)**	**Angle from North (°)**	**Initial Vertical Dimension (m)**	**Initial Horizontal Dimension (m)**
Area Source(s)										
Fugitive emission sources included in point source group										
name of the emissions unit2										
name of the emissions unit3										
name of the emissions unit4										
name of the emissions unit5										
name of the emissions unit6										
name of the emissions unit7										
name of the emissions unit8										
name of the emissions unit9										
name of the emissions unit10										
Volume Source(s)										
name of the emissions unit11										
name of the emissions unit12										
name of the emissions unit13										
name of the emissions unit14										
name of the emissions unit15										
name of the emissions unit16										
name of the emissions unit17										
name of the emissions unit18										
name of the emissions unit19										
(insert more rows as needed)										

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Please see instructions on page 2 before filling out the form.

Company Name:	Romero General Construction Corp.
Facility Name:	Mountain Home Air Force Base
Facility ID No.:	
Brief Project Description:	Concrete Batch Plant

BUILDING AND STRUCTURE INFORMATION

1.	2.	3.	4.	5.	6.	7.
Building ID Number	**Length (ft)**	**Width (ft)**	**Base Elevation (m)**	**Building Height (m)**	**Number of Tiers**	**Description/Comments**
Building 1 ID						No Building Downwash Considered
Building 2 ID						
Building 3 ID						
(insert more rows as needed)						

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PERMIT TO CONSTRUCT APPLICATION

Revision 3
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IDENTIFICATION		
Company Name: Romero General Construction Corp.	Facility Name: Mountain Home Air Force Base	Facility ID No:
Brief Project Description: Concrete Batch Plant		

APPLICABILITY DETERMINATION		
1. Will this project be subject to 1990 CAA Section 112(g)? (Case-by-Case MACT)	☒ NO	☐ YES* * If YES, applicant must submit an application for a case-by-case MACT determination [IAC 567 22-1(3)"b" (8)]
2. Will this project be subject to a New Source Performance Standard? (40 CFR part 60)	☒ NO	☐ YES* *If YES, please identify sub-part: _____
3. Will this project be subject to a MACT (Maximum Achievable Control Technology) regulation? (40 CFR part 63) THIS ONLY APPLIES IF THE PROJECT EMITS A HAZARDOUS AIR POLLUTANT	☒ NO	☐ YES* *If YES, please identify sub-part: _____
4. Will this project be subject to a NESHAP (National Emission Standards for Hazardous Air Pollutants) regulation? (40 CFR part 61)	☒ NO	☐ YES* *If YES, please identify sub-part: _____
5. Will this project be subject to PSD (Prevention of Significant Deterioration)? (40 CFR section 52.21)	☒ NO	☐ YES
6. Was netting done for this project to avoid PSD?	☒ NO	☐ YES* *If YES, please attach netting calculations

IF YOU ARE UNSURE HOW TO ANSWER ANY OF THESE QUESTIONS, CALL THE AIR PERMIT HOTLINE AT 1-877-5PERMIT

Attachment 2

Ambient Impact Assessment

AMBIENT IMPACT ASSESSMENT

Introduction

Romero General Construction Corporation (Romero) proposes to move a portable concrete batch plant currently located in Washington state to a location at the Mountain Home Air Force Base southwest of Mountain Home, Idaho (see Site Map). This batch plant will be a temporary installation that is only expected to be in operation for up to six months. Millennium Science & Engineering, Inc (MSE) was contracted by Romero to complete an ambient impact assessment to support their Permit to Construct (PTC) application for the concrete batch plant.

Air dispersion modeling was performed by MSE to demonstrate compliance with NAAQS for criteria pollutants and Idaho Department of Environmental Quality (IDEQ) screening levels for TAPs in support of a PTC Application for the Romero concrete batch plant. Due to time constraints, a modeling protocol was not prepared. The IDEQ provided modeling guidance for this project in an e-mail dated July 12, 2007.

Model Description / Justification

Air dispersion modeling was performed using the Environmental Protection Agency (EPA) AERMOD model. Due to relatively low estimated emission concentrations and the significant separation distance between the source and the nearest property boundary modeling was simplified as follows:

1.) The concrete batch plant emissions from each process were summed together and modeled as a single point.
2.) The electric generator emissions were modeled at the same location as the concrete batch plant.
3.) Separate modeling runs were completed for the concrete batch plant and the electric generator. A unit emission factor of 1 gram per second (g/s) was utilized to allow the same model run to be used for each of the potential pollutants of concern.
4.) Since the nearest property fenceline (ambient impact boundary) will be 955 meters from the source MSE established receptors using a polar grid with a radius of 955 meters.
5.) Because of the significant separation distance between the source and ambient impact boundary and uncertainties associated with the exact plant layout MSE assumed no building downwash. MSE performed one modeling run with a square building with sides 10 meters in length and 5 meters tall. The presence of this building had no impact on the predicted ambient air concentrations at the nearest ambient impact boundary; therefore, further modeling did not include any consideration for building downwash.

Emission and Source Data

Emissions from the concrete batch plant consist of three point sources (Cement Storage Bin 1, Cement Storage Bin 2, and Cement Batcher) and five fugitive

emission sources (aggregate delivery to ground storage, sand delivery to ground storage, aggregate transfer to conveyor, sand transfer to conveyor, and truck loading). To simplify modeling all of these emission sources were represented as a single point source (Concrete Batch Plant Group). Emissions from each source within the Concrete Batch Plant Group were calculated using EPA AP-42 emission factors and vendor supplied information. Four pollutants were considered for modeling from the Concrete Batch Plant Group: PM10, arsenic, chromium (VI), and nickel.

The electric generator emissions were modeled at the same location as the Concrete Batch Plant Group for modeling simplification. The emission rates for the generator were estimated from AP-42 emission factors and vendor supplied information. Four pollutants were considered for modeling from the generator: PM10, NOx, SOx, and CO.

Attachment 3 summarizes the emission estimates completed for this project and Attachment 4 provides equipment specifications. Table 1 summarizes the emission source characteristics used in the ambient impact analysis. All modeling was performed using the maximum potential to emit.

Receptor Network

A receptor network was established so that ambient concentrations could be evaluated. The first step in this process was to determine the location of the ambient air boundary and the second step was to assign receptor locations within the ambient air zone.

Ambient Air Boundary

The ambient air boundary was established as the facility's fenceline (see Site Map, for location of the fenceline). The proposed facility will be located at an active military base. The site is secure and actively monitored by security personnel to prevent unauthorized entry.

Receptors

To streamline modeling, receptors were established only at a simplified worse-case Ambient Air Boundary. This simplified Ambient Air Boundary was established as a circle with a radius equal to the shortest distance from the proposed source to the fenceline (955 meters). The maximum ambient impact was determined to occur at the facility's fenceline; therefore, receptors were only established along the Ambient Air Boundary.

Elevation Data

The site is relatively flat with very little variation in elevation (maximum of 10 feet). Because there is very little elevation change across the site, MSE assumed flat terrain for modeling purposes

Table 1
Emission Source Characteristics

Emission Source	Unit ID	Stack Height (m)	Stack Diam. (m)	Exhaust Temp. (°F)	Stack Gas Vel. (m/s)	Emission Rates (g/s) [3]						
						PM_{10}	NOx	CO	SOx	As	Cr (VI)	Ni
Cement Storage Bin 1	P1	6.4	cover	ambient	cover	0.0106	--	--	--	3.7E-6	1.4E-6	8.5E-6
Cement Storage Bin 2	P2	14.5	cover	ambient	cover	0.0106	--	--	--	2.3E-9	3.2E-9	2.3E-8
Cement Batcher	P3	5.6	cover	ambient	cover	0.006	--	--	--	--	--	--
Aggregate delivery to ground Storage	F1	fugitive	fugitive	ambient	fugitive	0.0469	--	--	--	--	--	--
Sand delivery to ground storage	F2	fugitive	fugitive	ambient	fugitive	0.0106	--	--	--	--	--	--
Aggregate transfer to conveyor	F3	fugitive	fugitive	ambient	fugitive	0.0469	--	--	--	--	--	--
Sand transfer to conveyor	F4	fugitive	fugitive	ambient	fugitive	0.0106	--	--	--	--	--	--
Truck loading	F5	fugitive	fugitive	ambient	fugitive	0.0688	--	--	--	5.0E-6	3.5E-6	2.0E-5
Concrete Batch Plant Group [1, 2]	CBPG	2	0.001	ambient	0.001	0.211	--	--	--	8.7E-6	4.9E-6	2.9E-5
Electric Generator [2]	P4	1.5	0.12	800	63.04	0.007	0.221	0.039	0.081	--	--	--

Notes:

(1) Stack gas velocity set to 0.001 m/s and diameter set to 0.001 m for modeling purposes since a cover over each baghouse causes downward flow.

(2) Modeling was performed for two sources, the Concrete Batch Plant Group and the Electric Generator. The Concrete Batch Plant Group includes three point sources and five fugitive emission sources.

(3) Modeling was performed utilizing a generic unit emission rate of 1 g/s. Model results for individual pollutants of concern were calculated by multiplying model determined ambient air concentrations by the pollutant emission rates.

Meteorological Data

Preprocessed meteorological data (surface and upper air) from the Boise airport was provided by the IDEQ. This data was processed by IDEQ using AERMET; the output files provided by the IDEQ were used as inputs to the AERMOD model for this site.

Land Use Classification

The land use around the proposed source is an United States Air Force Base. The Air dispersion modeling was performed using a "rural" classification.

Background Concentrations

Table 2 summarizes the criteria pollutant background concentrations. Criteria pollutant background concentrations for small town/suburban areas were provided by Kevin Schilling of the IDEQ.

Evaluation of Compliance With Standards

To determine compliance with NAAQS, the applicable background concentrations were added to maximum predicted ambient concentrations determined from air dispersion modeling to result in total ambient concentrations. These total ambient air concentrations were compared to the NAAQS. Table 2 summarizes the air dispersion modeling results and compares the total predicted ambient air concentration to the applicable NAAQS. Based on this evaluation, no NAAQS are predicted to be exceeded by emissions from the sources, if operated and configured as proposed in this application. See Attachment 5 for detailed modeling output summary and electronic modeling input/output files.

Table 2
Results of Ambient Impact Assessment for Criteria Pollutants
(All Concentrations in Units of $\mu g/m^3$)

Pollutant	Averaging Period	Maximum Air Dispersion Model Output	Compliance Demonstration			
			Background	Total	NAAQS	% NAAQS
PM10	24 hr, 2nd high	11	73	84	150	56%
	Annual	0.88	26	27	50	54%
NOx	Annual	0.59	17	18	100	18%
SOx	3 hr, 2nd high	3.0	34	37	1300	2.8%
	24 hr, 2nd high	1.1	26	27	365	7.4%
	Annual	0.22	8	8	80	10%
CO	1hr, 2nd high	2.9	3,600	3,603	40,000	9%
	8hr, 2nd high	1.0	2,300	2,301	10,000	23%

Evaluation of Ambient Impact Assessment for TAPs

Table 3 summarizes the results of air dispersion modeling performed to evaluate the ambient impact for TAPs. None of the AACC were exceeded by any of the maximum

predicted ambient air concentrations; therefore, the predicted ambient impact from TAP emissions is acceptable.

Table 3
Results of Ambient Impact Assessment for Toxic Air Pollutants
(All Concentrations in Units of $\mu g/m^3$)

Pollutant	Averaging Period	Maximum Air Dispersion Model Output	Idaho AACC	% of AACC
Arsenic	Annual, 1st high	3.54E-5	2.3E-4	15.4%
Chromium (VI)	Annual, 1st high	1.99E-5	8.3E-5	24.0%
Nickel	Annual, 1st high	1.18E-4	4.2E-3	2.8%

N

0 1,000 2,000
(Scale in Feet)

SOURCE: Google Earth, 2007.

MSE Millennium Science & Engineering, Inc.
1605 North 13th Street
Boise, ID 83702
Phone: (208) 345-8292

Site Map

Romero Construction
Proposed Concrete Batch Plant

Mountain Home Air Force Base
Elmore County, Idaho

	7-17-07	TDR	Figure 1

Attachment 3

Emission Estimates

Particulate Matter Emission Calculations
Temporary Concrete Batch Plant, Mountain Home, Idaho
Romero General Construction Corp.

Source	Controls	PM Emission Factor Uncontrolled (lb/yd^3 concrete)	PM Emission Rate Uncontrolled (lb/hr)	Control Efficiency	PM Emission Rate Controlled (lb/hr)	PM Emission Rate Controlled (ton/yr)
Cement Storage 1 Bin	PJC-300S	0.07	8.4	99.0%	0.084	0.37
Cement Storage 2 Bin	PJC-300S	0.07	8.4	99.0%	0.084	0.37
Cement Batcher (weigh hopper?)	BV-14 D	0.04	4.8	99.0%	0.048	0.21
Aggregate delivery to ground storage		0.0031	0.372	0.0%	0.372	1.63
Sand delivery to ground storage		0.0007	0.084	0.0%	0.084	0.37
Aggregate transfer to conveyor		0.0031	0.372	0.0%	0.372	1.63
Sand transfer to conveyor		0.0007	0.084	0.0%	0.084	0.37
Truck loading (truck mix)		0.0784	9.408	94.2%	0.55	2.39
		Total:	31.92	--	1.67	7.33

Notes:
1.) Emission factor for Cement Storage Bin 1 and 2 and Cement Batcher from vendor (CON-E-CO). Emission factors for other emission sources from AP-42 Chapter 11.12 "Concrete Batching".

Concrete Capacity and Composition Information

Maximum Capacity: 120 yd^3 concrete/hr

Assumed Concrete Composition (1 yd^3):

1865	lbs coarse aggregate
1428	lbs sand
491	lbs cement
73	lbs cement supplement
4024	lbs total

Ton material/120 yd^3 concrete:

111.90	ton coarse aggregate
85.68	ton sand
29.46	ton cement
4.38	ton cement supplement
231.42	ton total

Toxic Air Pollutant Emission Calculations
Temporary Concrete Batch Plant, Mountain Home, Idaho
Romero General Construction Corp.

Source	As		Be		Cd		Cr		Cr(VI)	
	EF (lb/ton)	Emissions (lb/hr)	EF (lb/ton)	Emissions (lb/hr)	EF (lb/ton)	Emissions (lb/hr)	EF (lb/ton)	Emissions (lb/hr)	EF (lb/ton)	Emissions (lb/hr)
Cement Storage 1 Bin	1.00E-06	2.95E-05	9.04E-08	2.66E-06	1.98E-10	5.83E-09	1.22E-06	3.59E-05	3.66E-07	1.08E-05
Cement Storage 2 Bin	4.24E-09	1.86E-08	4.86E-10	2.13E-09	4.86E-10	2.13E-09	2.90E-08	1.27E-07	5.80E-09	2.54E-08
Cement Batcher (weigh hopper)	--	--	--	--	--	--	--	--	--	--
Aggregate delivery to ground storage	--	--	--	--	--	--	--	--	--	--
Sand delivery to ground storage	--	--	--	--	--	--	--	--	--	--
Aggregate transfer to conveyor	--	--	--	--	--	--	--	--	--	--
Sand transfer to conveyor	--	--	--	--	--	--	--	--	--	--
Truck loading (truck mix)	1.16E-06	3.93E-05	1.04E-07	3.52E-06	9.06E-09	3.07E-07	4.10E-06	1.39E-04	8.20E-07	2.77E-05
Total		6.87E-05		6.18E-06		3.15E-07		1.75E-04		3.86E-05
EL		1.50E-06		2.80E-05		3.70E-06				5.60E-07
Model?		yes		no		no		see Cr (VI)		yes

Source	Mn		Ni		P		Se	
	EF (lb/ton)	Emissions (lb/hr)	EF (lb/ton)	Emissions (lb/hr)	EF (lb/ton)	Emissions (lb/hr)	EF (lb/ton)	Emissions (lb/hr)
Cement Storage 1 Bin	2.56E-07	7.54E-06	2.28E-06	6.72E-05	3.54E-06	1.04E-04	7.24E-08	2.13E-06
Cement Storage 2 Bin	1.17E-07	5.12E-07	4.18E-08	1.83E-07	ND		ND	
Cement Batcher (weigh hopper)	--	--	--	--	--	--	--	--
Aggregate delivery to ground storage	--	--	--	--	--	--	--	--
Sand delivery to ground storage	--	--	--	--	--	--	--	--
Aggregate transfer to conveyor	--	--	--	--	--	--	--	--
Sand transfer to conveyor	--	--	--	--	--	--	--	--
Truck loading (truck mix)	2.08E-05	7.04E-04	4.78E-06	1.62E-04	1.23E-05	4.16E-04	1.13E-07	3.82E-06
Total		7.12E-04		2.29E-04		5.21E-04		5.96E-06
EL		3.33E-01		2.70E-05		7.00E-03		1.30E-02
Model?		no		yes		no		no

Notes:
1.) Emission Factors from AP-42 Chapter 11.12 "Concrete Batching", Table 11.12-8.
2.) Emission Limits (EL) from IDAPA 58.01.01.585 and 586.
3.) Modeling performed for Toxic Air Pollutants (TAPs) emission rates that exceeded the EL.

Air Pollutant Emissions
Electricity Generator

Combustion Source Characteristics	
Genset Manufacturer	MQ Power
Genset Model	DCA180SSJ
Engine Manufacturer	John Deere
Engine Model	6066HF485
Break Horsepower (bhp)	315
Power Generation (kW - prime)	144
Fuel	Diesel
Max Hourly Fuel Consumption (gal/hr)	11.4
Heating Value (BTU/gal)	128,000
Heat Input Capacity (BTU/hr)	1,459,200

Stack Data	
Stack Height (ft)	5.0
Stack Diameter (ft)	0.38
Exit Gas Temperature (^oF)[c]	800
Wet Actual Flow Rate (acfm)	1,371
Wet Standard Flow Rate (wscfm)	251
Dry Standard Flow Rate (dscfm)	224
Grain Loading Flow Rate (dscfm)	290
Stack Velocity (m/s)	63.04
Fd (dscf stack gas/10^6 BTU)	9,190
Fw (wscf stack gas/10^6 BTU)	10,320

Miscellaneous Support Data	
Pressure at Standard Conditions (atm)	1
Temperature at Standard Conditions (K)	293
Ideal Gas Constant (atm-ft^3/mol-K)	1.314
Mountain Home Barometric Pressure (atm)	0.90

Criteria Pollutants

Pollutant	Emission Factor[a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)
PM_{10} (assume = PM)	0.08	g/bhp-hr	5.56E-02	0.24	0.007
SO_2	2.05E-03	lb/bhp-hr	0.65	2.83	0.081
NO_x	2.53	g/bhp-hr	1.76	7.70	0.221
CO	0.45	g/bhp-hr	0.31	1.37	0.039
VOC	2.47E-03	lb/bhp-hr	0.78	3.41	0.098

PM Grain Loading Standard[b]

Pollutant	Potential Emissions (lb/hr)	Grain Load @ 3% Oxygen (gr/dscf)	PM Grain Standard[b] (gr/dscf)	Meets Standard?
PM	0.056	0.022	0.05	yes

Notes:

(a) Emission factors for PM, CO, and NOx supplied by the vendor (MQ Power). Emission factors for SO_2 and VOC from AP-42 Chapter 3.3, "Gasoline and Diesel Industrial Engines" Table 3.3-1.

(b) IDAPA 58.01.01.677.

(c) The discharge temperature for the generator exhaust was reduced from 905 to 800 ^oF to account for heat losses from exhaust manifold to discharge elevation.